

REMARKS

Favorable reconsideration of this application is presently amended and in light of the following discussion is respectfully requested. Claims 19-37 are pending. Claims 19, 36 and 37 having been amended by way of the present amendment.

In the outstanding Office Action, Claims 19, 22-25, 28, 30-33 and 35-37 were indicated as being rejected over Carini et al. (U.S. Patent No. 3,876,462 in view of Takaoka et al. (U.S. Patent No. 4,571,453) and Hvizd, Jr., et al. (U.S. Patent No. 4,361,723); Claims 20 and 21 were rejected as being unpatentable over Carini in view of Takaoka and Hvizd in view of Elton et al. (U.S. Patent No. 5,066,881); Claims 26 and 29 were rejected as being unpatentable over Carini in view of Takaoka and Hvizd and in further view of Silver et al.; Claim 27 was rejected as being unpatentable over Carini in view of Takaoka, Hvizd, Silver and in further view of Robert; and Claim 34 was rejected as being unpatentable over Carini in view of Takaoka, Hvizd and Breitenbach.

In reply, the informality identified in Claims 19, 36 and 37 has been corrected herewith. Accordingly, for example, Claim 19 is directed to an insulated inductor for a high-voltage winding in an electric machine. The insulated conductor includes at least one uninsulated strand and a plurality of strands each being insulated from one another, and an inner conductive layer that surrounds and contacts the plurality of strands and said at least one uninsulated strand. The conductor also includes an insulating layer that surrounds the inner conductive layer, and outermost conductive layer that surrounds the insulating layer, and wherein a resistivity of the outermost conductive layer being in an inclusive range of 10-500 ohm*cm.

It should be noted that the claim is directed to an insulating wire for a high-voltage winding in an electric machine. This conductor includes an inner conductive layer that

surrounds and contacts said (1) plurality of strands, and (2) said at least one uninsulated strand.

This structure is not accidental, but rather is the result of an observation by the present inventors, that this structure is desirable when used as a high-voltage winding in an electric machine. A winding in an electric machine is subject to large magnetic fields. The present inventors recognized that a problem with large conductors when subject to high magnetic fields in electric machines is that large Eddy currents develop. Eddy currents are wasted energy that results in excessive heating and possible breakdown of the electric machine. In order to minimize the effect of Eddy currents, the present inventors recognized that the structure of having one uninsulated strand and a plurality of strands being insulated from one another helps to reduce the effects of Eddy currents. Furthermore, the insulation system of the conductor relies on the cooperation between an inner conductive layer, insulating layer and outer conductive layer. In order to distribute charge across the inner conductive layer, at least one uninsulated strand is brought into contact with the inner conductive layer. Furthermore, so as to suppress Eddy currents, not only uninsulated strands are placed around the outermost layer of the conductor, but also a plurality of strands that are insulated from one another are also brought into contact with the inner conductive layer. It is through this combination of features, that the present inventors realized that a conductor like the one discussed that is suitable for use as a high-voltage winding in an electric machine.

The outstanding Office Action asserts that Carini discloses all of the features of the invention defined by Claim 19 except Carini does not disclose at least one of an insulated strand and a plurality of strands each being insulated from one another, nor the resistivity feature. Regarding the resistivity feature, the outstanding Office Action asserts Hvizd. In order to cure the deficiency with regard to the at least one insulated strand and plurality of strands feature of Claim 19, the outstanding Office Action asserts Takaoka.

Regarding Takaoka, the outstanding Office Action asserts that Takaoka discloses a conductor for an electric cable, comprising at least one uninsulated strand (8_1 , 9_1) and a plurality of strands (8_2 , 9_2) each being insulated from one another. In this context, the outstanding Office Action is referring to Figs. 7 and 8 of Takaoka. Applicants respectfully traverse this rejection.

Claim 19 does not merely state that the conductor includes at least one insulated strand and a plurality of strands each being insulated from one another, but also requires that the inner conductive layer surround and contact the plurality of strands and at least one uninsulated strand. Takaoka fails to teach this feature. As seen in Figs. 7 and 8 for example, Takaoka provides concentric layers of uninsulated strands (all uninsulated strands), or insulated strands. No configuration in Takaoka includes both (1) at least one insulated strand, and (2) a plurality of strands insulated from one another that are in contact with an inner conductive layer. Accordingly, it is respectfully submitted that no matter how Carini, Takaoka and Hvizd are combined, the combination does not teach or suggest all of the features of Claim 19.

It is respectfully submitted that the outstanding Office Action has failed to make a *prima facie* case of obviousness with regard to Claim 19. One aspect of the *prima facie* case of obviousness, is that at least all of the features in the claim are found in at least one of the asserted references. The outstanding Office Action has failed to meet this requirement. Neither Carini, Takaoka, or Hvizd teach the feature of an insulated conductor in which the inner conductive layer surrounds and contacts the plurality of strands and the at least one uninsulated strand. Accordingly, it is respectfully submitted that the rejection of Claim 19 is improper.

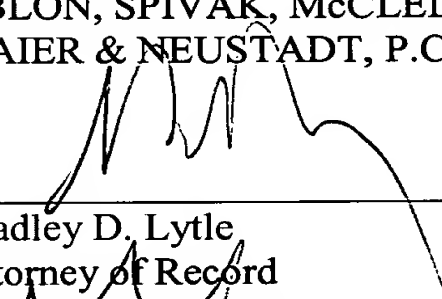
Although a different scope and/or statutory class, it is respectfully submitted that each of the other Claims 20-37, are rejected over the same combination of Carini and Takaoka in

addition to some tertiary and/or quaternary reference. However, for substantially the same reasons as discussed above why the outstanding Office Action has not made a *prima facie* case of obviousness with regard to Claim 19, it is respectfully submitted that the outstanding Office Action is similarly deficient with regard to Claims 20-37.

Consequently, in light of the above discussion and the fact that the outstanding Office Action has failed to make a *prima facie* case of obviousness, it is respectfully submitted that the invention defined by Claims 19-37 is patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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